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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/376,173	08/17/1999	ALAN L. TAYLOR	1956/123	6112

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EXAMINER	
ZHEN, LI B	

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/376,173	TAYLOR ET AL.	
	Examiner	Art Unit	
	Li B. Zhen	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 22-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,7-11,13,14,16,17 and 22-26* is/are rejected.

7)☒ Claim(s) *3,6,12 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *8/6/2004*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 17 and 22 – 26 are pending in the application.

Response to Arguments

2. Applicant's arguments with respect to claims 1 – 17 and 22 – 26 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

3. Claims 3, 6, 12 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1, 2, 4, 5, 7 – 11, 13, 14, 16, 17 and 22 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,734,903 to Saulpaugh [cited in previous office action] in view of U.S. Patent No. 5,617,570 to Russell.**

6. As to claims 22 and 25, Saulpaugh teaches the invention substantially as claimed including a computer system having a plurality of interconnected processors [intracomputer communication...message-based client-server communication; col. 1, lines 10 – 20], providing asynchronous communication services between a client application and a first target application [col. 11, lines 7 – 40], the message passing method comprising:

receiving a request from the client application for sending an asynchronous message to the first target application [asynchronous send message request; col. 12, lines 49 – 65];

sending the asynchronous message to the first target application [delivering the send message control block to the target message object; col. 3, lines 15 – 26; col. 12, lines 49 – 66];

receiving a confirmation from the first target application and notifying the client application using an asynchronous signaling mechanism [each type of asynchronous send message request additionally specifies...event notification information that indicates how the message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52].

7. Although Saulpaugh teaches the invention substantially as claimed, Saulpaugh does not specifically teach opening a session over an existing communication link between the client application and any of a plurality of target applications that have a open message passing session on the communication link.

However, Russell teaches executing client operation requests in a system including a server, at least one client generating operation calls for operations with respect to the server, and a connection mechanism for providing connections between the client and the server [col. 3, lines 23 – 30], opening a session [a user application will issue an initialize call to the connection mechanism to become a Client 16 and may then issue one or more bind/unbind operation calls to establish and delete connections and sessions with servers; col. 9, lines 57 – 65] over an existing communication link [connections 20, Fig. 1; col. 5, lines 39 – 49] between the client application [clients 16, Fig. 1; col. 5, lines 39 – 49] and any of a plurality of target applications [Servers 18, Fig. 1; col. 5, lines 39 – 49] that have a open message passing session on the communication link [there will be one CLB 28 for each Client 16 and there will be one or more Sessions 34 for each Client 16. There may, however, be more than one Connection 20 for each Server 18, and more than one Session 34 for each Connection 20, so that the Clients 16 share a pool of Connections 20 to each Server 18; col. 7, lines 9 – 16].

8. It would have been obvious to a person of ordinarily skilled in the art at the time of the invention to apply the teaching of opening a session over an existing communication link between the client application and any of a plurality of target applications that have a open message passing session as taught by Russell to the invention of Saulpaugh because this allows the clients to be isolated and insulated from the connection/server relationship such that the clients do not have to deal with the

complexities of the connection/server relationship, thereby reducing the burden on the clients and allowing the client normal internal request mechanisms to operate without modification [col. 16, lines 30 – 47 of Russell].

9. As to claim 23, Saulpaugh as modified teaches a "callback" routine [event notification information that indicates how the message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh] provided to the message passing service by the client application [each type of asynchronous send message request additionally specifies...event notification information that indicates how the message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh].

10. As to claim 24, Saulpaugh teaches the asynchronous signaling logic invoking the "callback" routine [message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh] when an asynchronous event is available for the client application [each type of asynchronous send message request additionally specifies...event notification information that indicates how the message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh].

11. As to claims 26, Saulpaugh as modified teaches notifying the client application using the asynchronous signaling mechanism [message transaction unit 44 is to notify

the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh] and closing the session [issue one or more bind/unbind operation calls to establish and delete connections and sessions with servers; col. 9, lines 57 – 65 of Russell].

12. As to claim 1, Saulpaugh as modified teaches a device [system 10, Fig. 1; col. 4, lines 20 – 40 of Saulpaugh] comprising a message passing service [object oriented message filtering unit 40, Fig. 1; col. 4, lines 20 – 40 of Saulpaugh] for communication services between a client application [client task] and at least one target [server task] application [object oriented message filtering unit 40 facilitates the transfer of a message from a client task 32 to one or more server tasks 34, Fig. 1; col. 4, lines 46 – 60 of Saulpaugh], comprising:

application blocking logic to block the client application for supporting synchronous communication services for the client application [in response to either type of synchronous send message request, the message transaction unit 44 blocks the sending client task 32; col. 11, lines 7 – 40 of Saulpaugh] and logic to unblock the client application [message transaction unit blocks the sending client task until the message transaction has completed, col. 11, lines 15 – 20 of Saulpaugh; Examiner notes that Saulpaugh teaches blocking the sending client task until the message transaction has completed, which clearly suggest the sending client is eventually unblocked] and sending a reply to the client application [message transaction unit 44 issues a final reply

to the client task 32 that originally sent the message; col. 16, line 60 – col. 17, line 5 of Saulpaugh];

asynchronous signaling logic [message transaction unit] to notify the client application of asynchronous events for supporting asynchronous communication services for the client application [each type of asynchronous send message request additionally specifies...event notification information that indicates how the message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh]; and

session control logic operably coupled to open a message passing session over a conduit [a user application will issue an initialize call to the connection mechanism to become a Client 16 and may then issue one or more bind/unbind operation calls to establish and delete connections and sessions with servers; col. 9, lines 57 – 65 of Russell] to allow communications with any of a plurality of target applications [a user application will issue an initialize call to the connection mechanism to become a Client 16 and may then issue one or more bind/unbind operation calls to establish and delete connections and sessions with servers; col. 9, lines 57 – 65 of Russell] that have an open message passing session on the conduit [there will be one CLB 28 for each Client 16 and there will be one or more Sessions 34 for each Client 16. There may, however, be more than one Connection 20 for each Server 18, and more than one Session 34 for each Connection 20, so that the Clients 16 share a pool of Connections 20 to each Server 18; col. 7, lines 9 – 16 of Russell] and operably coupled to close the message

passing service session [issue one or more bind/unbind operation calls to establish and delete connections and sessions with servers; col. 9, lines 57 – 65 of Russell].

13. As to claim 2, Saulpaugh as modified teaches providing synchronous communication services for the client application [in response to either type of synchronous send message request, the message transaction unit 44 blocks the sending client task 32; col. 11, lines 7 – 40 of Saulpaugh] over the message passing session [Operations between Clients 16 and Servers 18 are executed through sessions associated with Connections 20; col. 5, lines 49 – 61 of Russell] using the application blocking logic [message transaction unit 44 blocks the sending client task 32; col. 11, lines 7 – 40 of Saulpaugh], and providing asynchronous communication services for the client application over the message passing session [Operations between Clients 16 and Servers 18 are executed through sessions associated with Connections 20; col. 5, lines 49 – 61 of Russell] using the asynchronous signaling logic [each type of asynchronous send message request additionally specifies...event notification information that indicates how the message transaction unit 44 is to notify the client task 32 when the message transaction is complete; col. 11, lines 40 – 52 of Saulpaugh].

14. As to claim 4, Saulpaugh as modified teaches synchronous message receiving logic to block the client application using the application blocking logic [in response to either type of synchronous send message request, the message transaction unit 44 blocks the sending client task 32; col. 11, lines 7 – 40 of Saulpaugh] if a synchronous

message is unavailable for the client application [blocks the sending client task until the message transaction has completed; col. 11, lines 15 – 20 of Saulpaugh].

15. As to claim 5, Saulpaugh as modified teaches synchronous message receiving logic unblocks [see the rejection to claim 1] the client application upon receiving a synchronous message for the client application [message transaction unit 44 issues a final reply to the client task 32 that originally sent the message; col. 16, line 60 – col. 17, line 5 of Saulpaugh].

16. As to claims 7 and 8, these claims are rejected for the same reasons as claims 23 and 24 above.

17. As to claim 9, Saulpaugh as modified teaches the device is a storage processor for operation in a storage unit [system 10 comprises a processing unit 12...a predetermined amount of memory 18; col. 4, lines 20 – 30 and 40 – 46 of Saulpaugh].

18. As to claims 10, 11, 13, 14, 16 and 17, these are product claims that correspond to apparatus claims 1, 2, 4, 5, 7 and 8; note the rejections to claims 1, 2, 4, 5, 7 and 8 above, which also meet these product claims.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,926,636 to Lam teaches remote procedural call component management method for a heterogeneous computer network.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2126

lbz
August 6, 2004

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